HKU Master of Finance 2018

THE UNIVERSITY OF HONG KONG
Faculty of Business and Economics

University Affiliation Program
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Contents

2 The University
3 Faculty of Business and Economics
5 Message from the Dean
7 Message from the Programme Director
8 The Programme
11 Course Profiles
16 Accreditations and Academic Partnerships
17 Facilities
18 Faculty List
19 Admissions
The University

The University of Hong Kong was founded in 1911, but its history began in 1887 with the establishment of the Hong Kong College of Medicine. One of the most well-known international figures of the 20th century, Dr. Sun Yat-sen, the founding father of modern China, was among the college’s first graduates. In 1911, the foundation stone was laid to commemorate the establishment of The University of Hong Kong, or HKU, as its students and alumni fondly call it. Since then, the University has built upon a century of dedication and commitment to teaching and research excellence to become one of the leading comprehensive universities in Asia. In addition to its 11,687 academic and non-academic staff, HKU has a diverse body of over 16,809 undergraduates and 11,935 postgraduate students in the 2016/2017 academic year. HKU has been taking an active role in strategic international alliances with universities and research institutions worldwide. It has academic links with many universities in the world and plays host to 9,215 international students. The University is committed to cultivating internationalism on campus and to supporting staff and student mobility projects and international programmes at all levels.

Over a period of time the University has transformed into a dynamic meeting place where the world’s leading scholars, artists, captains of industry, and political leaders are engaged in an array of exciting intellectual, social, and scientific discourses. It’s no surprise that HKU was ranked 26th amongst the top 200 universities globally in the Quacquarelli Symonds (QS) World University Rankings 2018.

The University’s rich heritage of innovation in education and research continues to contribute to the cultural and intellectual life of Hong Kong and to the world of knowledge and learning. HKU takes pride in the achievements of its students, alumni and faculty and together they stand ready to meet the challenges of tomorrow.
Faculty of Business and Economic

With the aim of building the finest business and economics education in Hong Kong and the Asia-Pacific region, the School of Business and the School of Economics and Finance amalgamated in 2001 to form the Faculty of Business and Economics (FBE), the 10th faculty of The University of Hong Kong. In line with Hong Kong’s transformation into a major financial centre, both Schools have evolved over the years to sharpen their focus on business, economics and finance and achieve a reputation for excellence in their respective fields of study and research.

Vision
The Faculty of Business and Economics aims to be a leading institution in Asia for business and economics education and research.

Core Values

**Excellence**
We strive to hone knowledge and skills that are distinctive and purposeful to make an impact.

**Innovation**
We engage in innovative activities that advance businesses to create value for society.

**Global Orientation**
We broaden our horizons and endeavor to leverage globalization for benefits of society.

**Social Responsibility**
We promote a culture of integrity, ethicality and professionalism to contribute meaningfully as citizens of our communities.

Mission
- Recruit bright, intellectually curious and motivated students.
- Provide the highest quality education in business and economics.
- Advance the frontiers of business and economics knowledge by fostering innovative research that addresses significant global and regional issues.
- Promote understanding and acceptance of diversities in cultures and values.
- Build and utilize knowledge of globalization to improve efficiency and effectiveness of individuals and organizations.
- Cultivate the principles of ethics and social responsibility.
- Develop leaders in business, society and scholarship.
Message from the Dean

The financial market increasingly yearns for talents who are able to think out of the box to develop innovative solutions to global issues; and the ever-changing financial industry brings new challenges and opportunities to the ways in which professionals are educated and trained.

The HKU Master of Finance (MFin) programme, tailored to prepare future financial leaders for their roles in bringing positive impacts to the complex dynamics of global economy, is one of the most sought-after postgraduate programmes in the region. Drawing upon world-class faculties in finance as well as the combination of innovation, theory and practice, students are exposed to an exciting learning experience both in the classroom and in the industry. Our well-established international alumni network and strong relationship with the financial community enhance our students’ competitive edge and provide graduates with a wide range of career options in all financial sectors including commercial and investment banks, brokerage and investment firms, insurance companies, treasury departments of non-financial corporations, regulatory agencies, and also consulting and accounting firms.

To capitalise on the growing prominence of Financial Technology, a new stream on FinTech has been introduced this year to further strengthen our current provision covering Financial Engineering, Risk Management, and Corporate Finance. This new addition will give our students an even more extensive and well-rounded preparation for the financial profession.

If you are seeking opportunities to embark upon a financial career or to take it to the next level, I invite you to join us and become one of the candidates of this distinguished master's degree programme. I very much look forward to welcoming you to the Faculty.

Professor Hongbin Cai
Dean
Chair of Economics
Message from the Programme Director

Welcome to the Master of Finance Programme at The University of Hong Kong!

Our programme was founded in 2001 by Professor Eric C. Chang, a world renowned scholar and educator. It has become one of the most popular and successful programmes of its kind in the world. We receive thousands of applications from all over the world every year. Our alumni take leading roles in all major financial markets.

The global credit crisis of 2007-2008, the European sovereign crisis 2010-2012 and the development of Financial Technology (FinTech) speak of the demand for talent in finance with the specialized knowledge. Our programme offers four streams: risk management, financial engineering, corporate finance, and financial technology. The full-time programme usually takes one year to complete and the part-time programme, two years. The curriculum balances quantitative skills and visionary thinking. It offers a cutting-edge curriculum for financial analytics from Central District, Hong Kong, the most vibrant and opportune place in the world! I am confident that the programme provides a high return-to-investment learning opportunity, riding on China prospects, to students with both finance and non-finance backgrounds.

I cordially invite you to contact us, learn more about our programme, and let us help you with your career's next leap forward.

Dr. Rujing Meng
Director
Master of Finance Programme
The Programme

The HKU Master of Finance (MFin) is an interdisciplinary programme aiming to provide motivated individuals with not only cutting-edge training in financial theory, but also the necessary mathematical, statistical and computer training, allowing them to apply the knowledge in a multitude of financial disciplines: pricing derivative instruments and securities, modelling and forecasting financial markets, hedging and financial risk management, credit risk management, insurance and reinsurance, quantitative trading and arbitrage training, asset allocation and investment management, and asset/liability management.

Successful graduates will enjoy a competitive advantage in a wide range of career opportunities in commercial and investment banks, brokerage and investment firms, insurance companies, treasury departments of non-financial corporations, regulatory agencies, and also consulting and accounting firms.

Who Should Apply
This Programme is designed for people who have a keen interest in finance.

Curriculum
The Programme represents an optimal mix of fundamental and cutting-edge knowledge in all areas of modern finance. It includes four basic courses in Financial Analysis that are based on the Chartered Financial Analysts (CFA) curriculum, specifically designed to broaden the candidates' knowledge of Quantitative Analysis, Financial Statement Analysis, Economics and Fundamentals of Asset Valuation, such as investment valuation and portfolio management. These four Fundamental Core Courses allow students to gain a solid knowledge base to prepare for all levels of the CFA examination.

Upon successful completion of the Fundamental Core Courses for Financial Analysis, students will continue their studies in the Advanced Core Courses. After that, students can choose to concentrate in one of the four streams: Corporate Finance, Financial Engineering, Financial Technology and Risk Management, and take the two Stream Core courses, including the Capstone Course, plus two elective courses from the pool of electives to make up a total of twelve courses.

Graduates can be awarded the degree with double concentration in any two out of the four areas provided that they complete all the core courses in both areas plus two electives.
The Programme

Fundamental Core Courses for Financial Analysis

- Economics for Financial Analysis
  - Foundation in Economics for the Study of Finance

- Corporate Finance and Asset Valuation
  - Fundamentals of Equity Analysis
  - Fundamentals of Fixed Income Analysis
  - Fundamentals of Corporate Finance

- Financial Statement Analysis and Business Ethical Standards
  - Financial Statement Analysis
  - Ethical and Professional Standards

- Investment Analysis and Portfolio Management
  - Fundamentals of Portfolio Management
  - Fundamentals of Asset Pricing Models
  - Fundamentals of Fund Management and Alternative Investments

Advanced Core Courses

- Derivative Securities
- Mathematical Techniques in Finance
- Spreadsheet Modelling in Finance
- Fixed Income Securities and Interest Rate Modelling

Stream Core Courses

Corporate Finance Stream

- Advanced Corporate Finance (Capstone Course)
- Mergers, Acquisitions and Corporate Restructuring

Financial Engineering Stream

- Financial Engineering (Capstone Course)
- Advanced Option Pricing Models

Financial Technology Stream

- Big Data in Finance (Capstone Course)
- Quantitative Trading

Risk Management Stream

- Risk Management (Capstone Course)
- Credit Risk

Elective Courses (Choose 2)

- Advanced Corporate Finance*
- Advanced Financial Programming and Databases
- Advanced Option Pricing Models*
- Behavioral Finance
- Big Data in Finance*
- Credit Risk*
- Entrepreneurship in Finance: Hedge Funds, Private Equity and Venture Capital
- Equity Valuation and Investment Management
- Financial Engineering*
- Financial Services Regulations
- Fund Management and Alternative Investments
- Introduction to FinTech and its Impact on the Future of Banking and Finance
- Machine Learning and Artificial Intelligence in Finance
- Mergers, Acquisitions and Corporate Restructuring*
- Natural Language Processing and Text Analytics
- Quantitative Trading*
- Real Options and Dynamic Corporate Finance
- Risk Management*
- Seminar in Commercial Banking and Real Estate Financing
- Other electives

*Provided that it is not chosen as a stream core course
Not all the courses listed above will necessarily be offered each year.
The Programme

Elective from Other Taught Postgraduate Programmes
MFin students may also take up to two electives from MBA, Master of Economics (M Econ) and Master of Science in Business Analytics (MSc(BA)) programmes offered by the Faculty of Business and Economics, subject to availability and approval of the Programme Director.

Course Exemption and Advanced Standing

Course Exemption
Course exemption may be granted (normally by examination) to required courses, except the capstone course, if candidates
a) can produce evidence, such as transcript and course syllabus, that a course is equivalent in content to another course taken elsewhere for which a satisfactory grade has been obtained; or
b) are holding relevant professional qualifications which were obtained before admission to the programme.

No credits will be given for the exempted course and candidates shall be required to take an approved alternative course of the same credit value.

Advanced Standing
Advanced standing of required courses, except the capstone course, may be granted if
a) the course is completed at a graduate, postgraduate or master level from a recognized programme elsewhere within the last four years before admission to the programme and achieved a good grade in the course; or
b) the candidate possesses a relevant professional qualification which was obtained before admission to the programme.

In such cases, no replacement courses will be required and the tuition fees will be adjusted accordingly.

Applications for course exemption and advanced standing are subject to the approval of the MFin Programme Director and committees concerned.

Academic Calendar

Courses for full-time students are normally scheduled in the daytime at HKU Town Center in Admiralty, Cyberport Campus or Pokfulam Main Campus. Part-time classes will be held in weekday evenings, or on Saturdays. Examinations are normally on Saturdays.

The curriculum shall extend over a minimum of one academic year and a maximum of two academic years for full-time study, or a minimum of two academic years and a maximum of four academic years for part-time study. Full-time students normally need to take four classes each week whereas part-time students normally take two evening classes each week.

Graduation Requirements

Students are required to successfully complete twelve courses (for single concentration). Students who have failed a course are required to retake the course. If the failed course is an elective, students may choose to take another elective course as a substitute. In order to graduate, the total number of failures cannot exceed two in the entire period of study and a cumulative GPA of 2.0 or above must be achieved.
Course Profiles

Advanced Corporate Finance
This course is aimed to give students a solid understanding of theoretical and empirical contributions of modern corporate finance. Major topics of corporate finance, including valuation, equity offerings, financial leverage, payout policy, and mergers and acquisitions, will be extensively discussed. The course offers students an opportunity to appreciate how corporate managers apply financial concepts and theories to managing real business and how financial decisions generate significant impact on firm value. After taking the course, students are expected to possess the ability to logically evaluate a firm’s financial decisions and later resolve financial issues in real world.

Advanced Financial Programming and Databases
This course provides students a foundation in managing and analyzing financial datasets as well as other datasets. The first part of the course focuses on building skills – data manipulation using programming languages. The second part introduces various financial databases. Through practice on real-world financial datasets, students will learn methods used to warehouse and retrieve data for statistical computing. The course then turns to analytical methods with a focus on demonstrating these methods on real-data from various contexts in finance. Methods covered include statistical modeling and inference, machine learning, textual analysis, classification and alternative datasets. Problem sets and projects will be the primary mode of learning. Course learning will be supplemented with exposure to industry speakers from the local financial industry.

Advanced Interest Rate Models
This course covers advanced topics in interest rate modeling and builds on material covered in earlier derivatives and mathematical finance courses. The course integrates theory and practice and focuses on the methods and models used by financial institutions to value interest-rate products. These include spot and forward rate models such as the Hull-White, HJM and the LIBOR market models and their extensions (displaced diffusion, CEV, stochastic volatility) and their calibration to market caps and swaptions. Important theoretical material needed to understand and extend these models is also be integrated into the course (e.g. forward measure, change of numeraire/measure).

Advanced Mathematical Finance
This course further develops the course Mathematical Techniques of Finance 1, to cover the general principles, and current practice, in pricing and hedging derivative instruments. We first discuss hedging and spanning risk factors, and apply these concepts to option pricing with stochastic volatility and jumps, including the Heston Model. Related to this, we discuss the modeling of the price process as a Levy process, and associated Fourier Transform techniques. We then discuss finite difference methods, and apply these to various instruments, including convertible bonds. Finally, we discuss Monte Carlo methods, and techniques to make this method computationally efficient, and applicable to American options. This course will make much use of computer implementation.

Advanced Option Pricing Models
This course brings together the practical and theoretical knowledge taught in the other derivatives and risk management courses in the MFin programme to introduce some of the state-of-the-art option pricing models. The course dwells on the original insights of various authors for exotic option pricing and option pricing models with volatility smiles. In addition to the plain-vanilla European option model, the course discusses the continuous and discrete barrier, lookback, Asian, American, excursion option pricing models. It also discusses the jumps and stochastic volatility option pricing models, including the latest option pricing models under Levy processes. Although this course highlights the theoretical and technical motivation of the various models, its delivery requires some hands-on knowledge of Matlab programming. Students finished this course will be conversant to the latest development and technology in option pricing.

Applications of Derivatives in Financing and Risk Management
One of the key responsibilities of a CFO or CIO (chief investment officer) is to secure low cost funding for capital acquisition or leveraging an investment. Reduction in funding cost can be achieved through strong credit standing, negotiation with banks or offering of security packages to lenders. With appropriate use of derivatives, not only can CFO/CIOs often further reduce their funding cost but they can also tap more sources of funding. Globalization of financial markets allows capital to flow easily across borders, thus allowing borrowers to tap offshore funding. But offshore funding is often denominated in foreign currency which then requires the use of derivatives to swap it into the desired currency. In this course, candidates study the use derivatives in financing and liability risk management. Besides getting an overview of the various forms of financing currently available to corporations and financial institutions, candidates will also learn how to take advantage of the on-shore and offshore funding price gap in Asia and leveraging a company’s risk exposures to interest rate and currency movements. In addition, it will reinforce their derivatives knowledge acquired in other courses through case studies and recent applications as seen by financial market.

Behavioral Finance
Behavioral finance uses insights from psychology to understand how biases, heuristics, framing and emotions influence the decisions of individual and professional investors, markets and managers. We describe how and why these suboptimal decisions might deviate from those predicted by traditional financial or economic theory. We also show why arbitrageurs such as hedge funds cannot correct but instead choose to ride on the misbehavior and mispricing. We will explore the implications of investor psychology and limitation to arbitrage in the individual trading behaviors, aggregate stock market and the cross-section of average returns, and corporate finance. We examine how insights of behavioral finance complement the traditional finance paradigm, so that students will gain an understanding of how individuals and institutions actually make financial decisions (descriptive) and guidance on how to improve financial decision making (prescriptive) in themselves and others.

Note: Not all the courses listed above will necessarily be offered each year.
* Courses offered in the 2017-18 academic year.
Course Profiles

Big Data in Finance
This course provides students with a foundation in managing and analyzing large datasets for applications in finance. The first part of the course focuses on building skills - data custodianship and performance computing. Through practice on real-world financial datasets, students will learn methods used to warehouse and retrieve data for high-performance statistical computing. The course then turns to analytical methods with a focus on demonstrating these methods on real-data from various contexts in finance. Methods covered include statistical modeling and inference, machine learning, textual analysis, classification and alternative datasets. Problem sets and projects will be the primary mode of learning. Course learning will be supplemented with exposure to industry speakers from the local financial industry.

Corporate Finance and Asset Valuation
This course aims to provide students with understanding of (i) fundamental approaches for equity valuation, (ii) fundamental approaches for valuation of fixed income securities, (iii) the knowledge about corporate finance and behavioral approaches in asset valuation, and (iv) the recent development of valuation techniques. On the theoretical side, this course introduces fundamental knowledge for asset valuation, investment strategies, and portfolio management. On the practical side, this course covers recent topics that are related to the asset valuation techniques used in both Hong Kong and United States. Some projects about asset valuation are specially designed to let you apply the theoretical knowledge into practice. This course is highly recommended for students who intend to pursue a career in financial markets or further studies in equity valuation and securities analysis. Certainly, the knowledge from this course will also be very useful when you make your own personal investment decision.

Corporate Financial and Risk Management
This course covers a specific subset of topics in corporate finance including risk management, hedging, capital structure, and liquidity management. The basic idea of the course is that all corporate financial decision-making is a form of risk management. They are centered around the mechanics of the financial markets and relevant to risk management. In addition, the course examines various techniques used to manage and mitigate risk exposures, including financial derivatives and risk management strategies. The course is designed to equip students with a solid understanding of the role of financial risk management in the corporate setting.

Credit Risk
A comprehensive analysis of credit risk measurement and capital adequacy. Topics include credit events, expected default frequency, expected exposure, loss given default, default correlation, KMV, Credit Metrics, credit ratings performance and migration, total return swaps, credit default swaps, basket default swaps, credit spread forwards and options, exotic credit derivatives, credit-linked notes, collateralised debt obligations, Basel II and SME lending.

Current Topics in Finance
This is a special course that deals with various current topics in finance. Topics covered may vary from year to year, depending on the research interests of the instructor.

Derivative Securities
Derivatives have become a popular hedging and investment tool, especially in the last few decades and derivatives concept are required for every student in the advanced finance topics. This course provides students with a framework to understand the fundamental concepts of derivatives products, including (i) forwards, futures, options, swaps, and basic structured products, (ii) to develop the necessary skills used in valuing derivative contracts, and (iii) to understand a wide variety of issues related to risk management and investment decisions using derivatives. The course intends to provide solid foundation for other advanced courses of the program such as mathematical finance, risk management, fixed income securities, and financial engineering.

Economics for Financial Analysis
This module provides the foundation in economics that is essential in financial analysis. The major topics include microeconomics, macroeconomics and international economics, consumer choice, costs and the supply of goods and services, competitive and market structure, the role of government in the economy, national income accounting, business cycles, aggregate demand/supply, fiscal and monetary policies, the level and structure of interest rates, the role of expectations in economic analysis, economic analysis, economic growth, comparative advantages and international trade, international finance and foreign exchange markets. Appropriate references will be made to current issues in Hong Kong, the region and the international economy.

Entrepreneurship in Finance: Hedge Funds, Private Equity and Venture Capital
This course provides students with the foundations and practical knowledge enabling them to launch and manage their own entrepreneurial venture including a hedge fund, private equity, venture capital or asset management firm. Taught as a combination of practical classes and guest lectures by industry professionals, the course covers the entire fund and business launch spectrum including fund structuring, investor capital raising, investor due diligence, regulatory, tax, governance, fund terms, private placement regulations, market trading rules, service provider selection, counterparty selection, employment matters, real estate, technology, operations, etc. The course also covers the investor landscape and investor lifecycle from early stage investors to institutional capital raising from global family offices, fund of funds, endowments, private banks and pension funds. We also cover the ongoing management and deal making of such funds from angel and venture capital early investments to private equity deals and exits. The course also discusses the global trends and industry institutional best practices, the customs and usage in the industry as well as some of the future trends, including FinTech and cybersecurity, and their impact on the industry. This is a very practical course with a heavy emphasis on the latest industry trends and best practices rather than theoretical concepts.

Note: Not all the courses listed above will necessarily be offered each year.
* Courses offered in the 2017-18 academic year.
Course Profiles

Equity Valuation and Investment Management*
This course aims to provide students with a practical approach to equity valuation and investing. They will learn how to apply the key concepts, techniques and tools used by market practitioners in making real-world investment decisions. Topics include: identifying sources of value, core valuation techniques - discounted cash flow, multiples analysis of comparable companies, real option valuation, and other valuation methods commonly used by practitioners; an overview of the asset management industry; the fundamental assumptions and approaches to value investing; risk management in the investment process.

Financial Econometrics
This course intends to be a highly applied one. The knowledge of econometrics that has immediate applications in finance will be imparted to students. This course is not a pure econometrics theory course, nor is it a course to exhaust financial applications of econometrics. It is designed to equip students with knowledge of relevant econometric theories and the ability to apply such knowledge to several finance models. Students are required to do computer exercises to implement relevant econometric techniques during the course. Upon completing the course, students are expected to appreciate usual practical applications of econometrics in finance and carry out their own empirical investigations. The course should help students gain access to more advanced topics if they so wish.

Financial Engineering*
Financial engineering is the process of constructing new instruments by using bonds and individual derivatives such as forwards, calls, puts, and common exotic options as basic building blocks. The process involves designing, pricing and managing the instruments. In this course, we anatolize a few popular structured products. Some of them have been traded in the Chicago Board Options Exchange, and Hong Kong exchanges and Clearing Limited. And others, such as equity-linked high yield notes and capital guarantee funds are sold by the commercial banks in Hong Kong. We then discuss how to price these products by studying the price of the embedded exotic options. We study the risk exposure of the retail investors and risk management for the commercial banks. We also discuss some topics on the market for volatility trading, recent development of option-pricing models and global financial crisis.

Financial Engineering in Practice
This course is designed to provide a holistic view of financial engineering. We introduce the students to the whole work flow of product design, pricing, packaging and post-execution management. The emphasis is on real-life practical concerns and on financial markets in Asia region. We aim to provide a comprehensive and consistent view of the various underlying financial assets and their characteristics. We emphasize the importance of a client-oriented engineering process and aim to illustrate the characteristics of various client segments with different investment and hedging needs. As part of the course, students are introduced to several financial products such as FX carry strategy and commodity derivatives etc. After course completion, a student should have a better understanding not only of the process of financial engineering but also of how financial engineering fits into the machinery of a modern investment bank.

Financial Services Regulations*
This course provides students with the legal background necessary to cope with the regulatory requirements in banking and finance. It covers the legal aspects of corporate governance, the legal framework of banking and finance, and financial products, including derivatives. This course also provides students with background on market access in financial services as China embarks on liberalisation of its financial markets as a member of the WTO.

Financial Statement Analysis and Business Ethical Standards*
This course provides an introduction to the financial statements and the financial reporting process from a user's perspective. The course focuses on fundamental accounting concepts and principles as well as techniques related to financial statement analysis. Ethical and professional standards that persons engaged in the professional practice of financial analysis and investment management should know, understand, and apply are also covered.

Fixed Income Securities and Interest Rate Modelling*
This course introduces various state of the art techniques in modeling fixed income securities. In particular, the course starts with the discount factor approach in pricing all kinds of bonds. Then we focus on modeling the discount factors. Models are introduced in two major parts. First, the course emphasizes discrete-time models based on binomial trees in order to understand the economic insight of the risk-neutral pricing. Second, extensions to continuous-time models are also discussed in detail. Calibration and implementation of the models will be studied. Other related topics may include interest rate risk management, interest rate derivatives, and monetary policy.

Fund Management and Alternative Investments*
Hedge funds are one of the fastest growing sectors of asset management. This course studies the styles of hedge funds and management strategies from an investment decision-making perspective. Topics covered in this module include environment and micro-structure of capital market, investment strategies, quantitative tools, derivative products, investment performance evaluation and discussions of some hedge funds failures. Special attention is given to various practical investment strategies and their risks, including equity selection techniques, market-neutral portfolio constructions, arbitrage strategies, emerging market investment, shortselling problems, etc.

Global Investing
The global financial market is flat. International financial markets have experienced an explosive growth in the past two decades. Financial innovations, deregulation of national markets, the rise of emerging markets and the massive increase in international assets held by governments have fuelled a global liquidity wave and opened new avenues for international investments. At the same time, the speed and depth of the global contagion experienced in the wake of the US subprime crisis has underscored the global markets/ products' interconnectedness. The purpose of this seminar would be to offer a framework for the analysis of international investment decisions. The seminar will extend the standard investments theories and products to a global setting through a series of introductory lectures, but the focus will be hands-on interaction with the students through case studies and analysis of materials in class.

Note: Not all the courses listed above will necessarily be offered each year.

* Courses offered in the 2017-18 academic year.
Course Profiles

Introduction to FinTech and its Impact on the Future of Banking and Finance*

The world of global finance, banking and financial services is changing rapidly with the emergence of start-up financial technologies, commonly referred to as FinTech that may disrupt the status quo. Taught as a series of practical courses and guest lectures by industry entrepreneurs and professionals, the course covers the main pillars of the FinTech start-up ecosystem in Asia, including peer to peer lending platforms, internet finance, online finance, bitcoin, digital currencies, digital payments, big data, cybersecurity, cryptography, etc and their practical impact on global banking and finance. This course will provide students with the latest empowering and practical knowledge on FinTech enabling them to understand some of the FinTech changes taking place currently in the financial services industry and most importantly, the trends that will impact the industry in the future. This is a very practical course with a heavy emphasis on guest lectures on the latest industry trends and best practices by industry experts and entrepreneurs rather than theoretical concepts.

Investment Analysis and Portfolio Management*

This course aims to provide students with understanding of (i) fundamental knowledge for asset valuation, (ii) portfolio management techniques for risk management and speculation, (iii) investment strategies adopted in financial market, and (iv) the recent development of portfolio management tools and investment strategies. On the theoretical side, this course introduces fundamental knowledge for asset pricing, investment strategies, and portfolio management. On the practical side, this course covers recent topics that are related to the investment strategies and portfolio management in both Hong Kong and United States. Some projects about portfolio management and asset valuation are specially designed to let you apply the theoretical knowledge into practice. This course is highly recommended for students who intend to pursue a career or further studies in investment strategies and portfolio management. Of course, the knowledge will also be very useful when you make your own personal investment decision.

Macroeconomic Analysis and Forecasting

Divided into two parts, the first half deals with the theory and practice of modern macroeconomic analysis. The design of the course aims at making close contact with current macroeconomic events and providing an integrated view of macroeconomics. To achieve such goals, the introduction of a unified model that concentrates on the implications of equilibrium conditions in three sets of markets: the goods market, financial markets, and the labor market. A variety of applications and examples will be offered to show how economic concepts can be put to work in explaining real-world issues. The second half of the course concerns the forecasting of economic time-series, and focuses on techniques and models that are routinely used in applied work. Topics include ARIMA models, trends and seasonality, aberrant observation, non-linearity, ARCH and GARCH models, multivariate time-series and VAR models. As part of the course requirement, students are expected to generate and evaluate their own forecasts by using appropriate time-series models that are supported by key features of the data.

Machine Learning and Artificial Intelligence in Finance*

Machine learning and artificial intelligence are the apex technologies of the information era. These methods are getting increasingly popular in the financial market. This course provides students the fundamental models and methods of machine learning and apply them to solve real-world financial problems. The topics include regression, classification, clustering methods, model selection, topic modeling and policy search. The first part of the course focuses on supervised learning techniques for regression and classification. The second part of the course covers unsupervised learning techniques for clustering and matrix factorization. The third part of the course covers reinforcement learning algorithms. The last part provides the fundamental concepts of artificial intelligence and its implications. The course provides introductions to the latest datasets in financial markets and practices applying learning algorithms to these datasets in a variety of topics. The primary mode of learning is based on assignments and projects.

Mathematical Techniques in Finance*

There are three main approaches to mathematical finance: the tree approach, the martingale approach and the partial differential equation approach. This course will present these three approaches and their applications to pricing and hedging financial derivatives. The corresponding numerical methods of the three approaches are lattice method, Monte Carlo simulation method, and finite difference method. We might briefly introduce them. Along the lectures, we will also review necessary mathematics, such as calculus, partial differential equation, applied probability and stochastic calculus. After taking this course, students should be able to fully understand no-arbitrage theory, risk-neutral probability, martingale, and Black-Scholes equation. The purpose of this course is to lay down a solid mathematical foundation for students to learn more advanced topics in financial engineering and risk management, such as exotic options, interest rate derivatives and credit risk models.

Mergers, Acquisitions and Corporate Restructuring*

This course is designed to develop a solid understanding of commonly discussed and applied issues in merger and acquisitions (M&As). The topics covered in this course include the M&A process, methods of valuing a target firm, valuing synergies, the form of payment and financing, assessing the highly levered transaction, governance in M&A, and M&A negotiation. Cases in M&As will be used in the discussion of the various topics. By going through analyses and discussions of real-life M&As, students will gain experiences in the application of financial theory and techniques to evaluate a M&A decisions and transactions.

Natural Language Processing and Text Analytics*

This course covers the main elements of natural language processing (NLP), text analytics, and text mining, providing students with a foundation in collecting, managing, and analyzing textual data. This course consists of three parts. In the first part, we work with real-world textual datasets to obtain proficiency in collecting, importing, organizing, and cleaning textual data. Among others, we cover web scraping, textual corpora, text processing, tokenization, stemming, and stop word removal. In the second part we delve into a more detailed analysis of NLP, text analytics, and machine learning. For instance, we examine bag-of-words, word weighting schemes, document classification, document clustering, sentiment analysis, and topic models. The third part consists of summarizing, displaying, and visualizing results obtained from NLP and text analytics for applications in finance.

Note: Not all the courses listed above will necessarily be offered each year.

* Courses offered in the 2017-18 academic year.
Course Profiles

Quantitative Trading*
This course provides a foundation for advanced quantitative trading in financial markets. The course has two parts. First, the course reviews stylized facts and methods used for time-series predictability, cross-sectional asset pricing and strategy performance evaluation. The second part of the course uses these tools to study recent advances in investment strategies sourced from academic and practitioner literature. For example, the course will discuss new theories on risk premia, intermediation-based asset pricing, and quantifiable soft information and alternative data. The primary method of learning will be a combination of problem sets and projects. Subject to availability, learning will be supplemented with exposure to industry speakers from the local financial industry.

Real Options and Dynamic Corporate Finance*
A real option is a right—not an obligation—to take an action on an underlying real asset. The action may involve, for example, abandoning, expanding, or contracting a project or even deferring the decision until a later time. Real options analysis (ROA) is a tool that helps to quantify the value of a real option. This course provides a synthesis of modern asset pricing and corporate finance via the framework of ROA. The course compares and contrasts ROA with the traditional tools of valuation. The benefits and limitations of ROA in terms of practical applications are also discussed.

Risk Management*
The objective of this course is to introduce concepts, techniques and framework for quantitative risk management at financial institutions. Financial firms, with their complicated list of positions in a mixture of instruments, are exposed to various sources of financial risk. This class focuses mainly on market risk, the risk of unexpected changes in prices and rates. The first part of the course introduces basic concepts in risk management and builds the toolkit for measuring risk quantitatively. The second part of the course is devoted to studying the widely accepted Value at Risk (VaR) systems, including calculations, back testing and flaws of VaR. The course also touches on other aspects of financial risk such as liquidity risk, credit risk and operational risk.

Risk Management for Insurance Companies and Financial Conglomerates
This course offers latest developments in the theory and practice of risk measurement and management in the areas of (i) life insurance, (ii) property-casualty insurance, (iii) natural catastrophe risks, and (iv) commodity price risk.

Seminar in Commercial Banking and Real Estate Financing*
This course covers bank management techniques that include asset and liability management, liquidity and reserve management, credit analysis, loan pricing and off-balance-sheet banking, as well as regulatory issues of commercial banks. It also discusses issues related to mortgage loan products and how real estate risks may affect the market value of mortgages.

Special Topics in Finance: Market Microstructure
This course examines the effects of market designs and trading mechanisms on various dimensions of trading quality. Its main objective is to help candidates to understand how markets work, how governments and exchanges regulate them. Candidates will learn who makes market liquid; why some traders consistently profit from trading while others lose; and how trading rules/mechanisms affect price efficiency, liquidity and trading profits. With this knowledge, they can improve their trading strategies. If candidates are regulator or exchange officials, this knowledge will help them to design better markets. This course is also practical and covers many realistic trading mechanisms around the world. To develop candidates' ability to apply theories into practices, this course covers several contemporary issues on market microstructure.

Spreadsheet Modelling in Finance*
This course is intended to introduce spreadsheet (MS Excel) as a financial modelling tool and understand its capabilities and limitations. It is designed to teach students to apply Visual Basic for Applications (VBA) to automate spreadsheet applications and extend the functionality of the spreadsheet. Numerical derivative pricing by implementing models in VBA will be illustrated. Examples include Black-Scholes formula, Greeks parameters, Binomial Tree and Monte Carlo Methods. Statistical computations with application to Risk Management will also be demonstrated. This course will also explore how to optimise the computational power of Excel through the VBA.

Trading Workshop
This course covers financial data and software tools as well as the operational side of derivatives trading in a trading lab environment. Students will learn how the major systems such as Reuters and Bloomberg work in trading. Students will be shown the manner in which transactions are executed, either across telephone lines, telex or electronic trading devices, and the manner in which systems are used to help dealers update their trading blotters, and how positions are updated and risk monitored. Students will also learn the pre-settlement stage of each transaction and the settlement issues, including back-office support in accounting and handling of counter-party risk.

Guest Speakers Series
Students of the Programme will have the opportunity to attend lectures given by eminent visiting professors from many top universities worldwide. Some courses will also be co-taught by senior bankers and industrialists in their relevant fields. The MFin Programme has strong links with the business community. Leading business representatives will be invited for talks and seminars on a regular basis. These interactive sessions form an important part of the learning process. Business leaders will share their experiences and values, providing students with insights in addition to the normal curriculum.

Note: Not all the courses listed above will necessarily be offered each year.
* Courses offered in the 2017-18 academic year.
Accreditations

AACSB
The Faculty was conferred accreditation of its accounting and business degree programmes by the Association to Advance Collegiate Schools of Business (AACSB) in April 2010. AACSB accreditation represents an achievement of excellence in business education. Only about five percent of the world’s business schools have obtained the status. The Faculty’s attainment of the accreditation has demonstrated that it has not only met the high standards of AACSB but has also been fully committed to continuous improvement to ensure that its programmes are of high quality and keeping up with the demand of its students and the business world.

EQUIS
The Faculty has been conferred the European Quality Improvement System (EQUIS) Accreditation label since June 2004. EQUIS is the premier international accreditation body and the leading international system of quality assessment, improvement and accreditation of higher education institutions in management and business administration. HKU FBE was among the first few business faculties to achieve this great honour in Hong Kong.

Academic Partnerships

University Affiliation Program
HKU Master of Finance has become an Affiliated University of CFA Institute, a global association of investment professionals that sets the standard for professional excellence and credentials. The CFA Program sets a standard for developing the skills, standards, competence, and integrity of financial analysts, portfolio managers, investment advisers, and other investment professionals worldwide. It is widely considered the investment profession’s most rigorous credentialing program. Status as an Affiliated University signals to potential students, employers, and the marketplace that the university curriculum is closely tied to professional practice and is well-suited to prepare students to sit for the CFA Program examinations. Scholarships from CFA Institute will be offered to HKU MFin students.

FRM Academic Partner of GARP
The University of Hong Kong has been added to the Global Association of Risk Professionals (GARP) Partnership for Risk Education with Master of Finance curriculum. GARP is a globally recognized organization dedicated to preparing professionals and organizations to make better-informed risk decisions. The academic partnership with GARP proves that our efforts in providing the best financial education are highly recognized. The alignment with GARP signals to students and their potential employers that our Master of Finance curriculum is closely tied to the market and is well-suited to prepare students for the demand of the global financial industry.

"GARP is very pleased to announce the addition of The University of Hong Kong to the GARP Partnership for Risk Education. The Master of Finance offered by The University of Hong Kong is a rigorous, well regarded program. The interdisciplinary nature of the curriculum offered provides a solid theoretical as well as practical foundation for its students, ensuring they will be well positioned to pursue the FRM designation and to assume strategic roles within the global risk management profession."

Dr. Chris Donohue,
Managing Director - Head of Research & Educational Programs, GARP

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Facilities

Admiralty Town Centre
Our Admiralty Town Centre, located at the Admiralty Centre, which is right above the MTR Admiralty Station, brings the resources of the University to the heart of business in Hong Kong.

The downtown campus is a state-of-the-art learning environment. Its hi-tech, multimedia presentation systems make it an ideal teaching venue. To facilitate effective communications, students can make use of the network access points in the downtown campus - the system provides round-the-clock roaming access to online course materials and other Internet resources through wireless LAN access.

Cyberport 4 Campus
Cyberport is located in south-western part of Hong Kong Island with only 20 minutes away from the heart of the city. Equipped with world-class information technology infrastructure along with relaxing environment, our Cyberport 4 campus is the most ideal place for executive education. Facilities and amenities include grade-A office buildings, five star hotel, shopping arcade and restaurants, etc.

Computer Facilities
Our commitment to becoming a leading programme in financial education has led to our ever-increasing endowments in incorporating the latest financial software and hardware technologies into our Programme.

A first-hand trading experience can be acquired from our exquisite laboratory located at the University's main campus, which is a modern miniature of today's financial trading floors. Electronic communication devices for delivering computational results are an integral part of the Programme. The devices not only build a platform to exchange academic information, but also form an educational forum among student, practitioners, and academics.

The Bloomberg Laboratory of the School of Economics and Finance was established in 2010. It has 11 Bloomberg terminals and 6 non-Bloomberg terminals for students and teaching staff members of the School. Bloomberg Professional® services ("Bloomberg") is the premier source of market information and analytical tools for financial managers. Through the Bloomberg terminals, students can gain access to the information available to practitioners and acquire practical market knowledge and skills they are expected to master by the finance industry. It bridges the gap between theory and practice and helps students develop a holistic and coherent understanding of global financial markets.

Students are required to bring in their laptops to classes for courses that require hands-on practice of financial models.
Faculty List

Aslanyan, Henrik (LLM Master's, ULM; PhD University of North Carolina at Chapel Hill) - Adjunct Associate Professor

Bergin, James B. (LLM, MSc, PhD, Ph.D. Stanford) - Visiting Professor

Buchmuller, Matthias (PhD, ETH, Zurich) - Professor

Chai, Honghui (PhD, Stanford) - Associate Professor

Chan, Alex W.H. (BS, MS, PhD, Stanford) - Principal Lecturer

Chan, Derek K.W. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Chan, William M.C. (BS, MS, PhD, University of Chicago) - Assistant Professor

Chang, Eric C. (BS, MS, PhD, University of Chicago) - Assistant Professor

Chen, Henry H. (PhD, University of California, Berkeley) - Assistant Professor

Chen, Hong Le (BS, MS, PhD, University of Chicago) - Assistant Professor

Chen, Xiaoliang (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Chiu, Stephen Y.W. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Chung, Stephen T.F. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Fung, K.C. (BS, Swarthmore College, MS, PhD, University of California, Berkeley) - Visiting Professor

Gu, Olivia Lifeng (BS, University of California, Berkeley) - Assistant Professor

Hsu, Timothy D.K. (BS, Stanford, MA, PhD, University of Chicago) - Assistant Professor

Ho, C.P. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Hsu, Barry J.C. (BS, ECE, PhD, University of California, Berkeley) - Assistant Professor

Hsu, Paul P.H. (BS, PhD, University of California, Berkeley) - Adjunct Associate Professor

Hsu, Grace X. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Huang, Shiyang (BS, PhD, University of California, Berkeley) - Assistant Professor

Huang, Victor T.T. (BS, MS, PhD, University of California, Berkeley) - Adjunct Associate Professor

Kwan, Alan P. (BS, University of California, Berkeley) - Assistant Professor

Kwok, Claudian S.K. (BS, University of California, Berkeley) - Assistant Professor

Kwok, H.H. (BS, ECE, PhD, University of California, Berkeley) - Assistant Professor

Kwok, K.C. (BS, MS, PhD, University of California, Berkeley) - Honorary Senior Research Fellow

Lee, Paul S.H. (BS, MS, PhD, Stanford) - Associate Professor

Leung, Winnie S.C. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Li, Dan (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Li, Zhongyan (BS, PhD, University of California, Berkeley) - Assistant Professor

Li, Zheli (BS, Stanford) - Assistant Professor

Lin, Chen (BS, PhD, University of California, Berkeley) - Assistant Professor

Lin, Tai (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Lin, Tsung-Jung (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Luo, Yulei (BS, PhD, University of California, Berkeley) - Assistant Professor

Ma, Chicheng (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Meng, Jinhua (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Meng, Ruijun (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Park, Sangyoon (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Qin, Bei (BS, PhD, University of California, Berkeley) - Assistant Professor

Qiu, Huijuan (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Qiu, Larry D.X. (BS, PhD, University of California, Berkeley) - Assistant Professor

Schmidt, Thomas (BS, PhD, University of California, Berkeley) - Assistant Professor

Sinclair, Andrew J. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Song, Frank M. (BS, PhD, University of California, Berkeley) - Assistant Professor

Suen, Wing W.C. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tai, Minghsu (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tang, Dragon Y.J. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tao, Zhigang (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tran, Jiajun (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tikku, Sanjaya (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tsai, C.Y. (BS, MS, PhD, University of California, Berkeley) - Associate Professor

Tse, Maurice S.K. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Tsui, Kevin C. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Wang, Zigar (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Wong, Anna W.K. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Wong, Kevin M.K. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Wong, Keith P.K. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Xu, Steven P. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Xu, Zijing (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Xue, Yong (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Yam, Joseph C.K. (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Yuan, CW (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Zhang, Hongchao (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Zhang, Wei (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Zhou, Chen (BS, MS, PhD, University of California, Berkeley) - Assistant Professor

Zou, Hong (BS, MS, PhD, University of California, Berkeley) - Assistant Professor
Admissions

Admission Requirements
To be eligible for admission to the Master of Finance Programme, a candidate must:

- hold a Bachelor’s degree of this University, or a qualification of equivalent standard from this University or another comparable institution accepted for this purpose;
- obtain statements from two referees, regarding his/her suitability for the Programme; and
- obtain a TOEFL/IELTS score if he/she is not from an English teaching university.

For the Financial Technology Stream, candidates with computer science, engineering, mathematics, physics, statistics, or science and technology related background are highly preferred.

GMAT/GRE scores are not required, but a good GMAT/GRE score will be favorably considered and can be helpful for marginal cases.

Admission Schedule

<table>
<thead>
<tr>
<th>Application Deadline</th>
<th>Round 1</th>
<th>September 25, 2017</th>
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<tbody>
<tr>
<td></td>
<td>Round 2</td>
<td>October 23, 2017</td>
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<tr>
<td></td>
<td>Round 3</td>
<td>November 20, 2017</td>
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<tr>
<td></td>
<td>Round 4</td>
<td>December 20, 2017</td>
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<tr>
<td></td>
<td>Round 5</td>
<td>January 15, 2018</td>
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<td></td>
<td>Round 6</td>
<td>February 20, 2018</td>
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</tbody>
</table>

Offers will be made on a rolling basis and early applications are preferred in the sense that a large proportion of offers will be allocated to applications in early rounds. Candidates are therefore highly recommended to submit their applications and supporting documents as soon as possible. Admission decisions are generally available in five to six weeks after the interim application deadline and successful candidates will be notified by email. For those who do not receive offers from the MFin Programme Office, their files will be considered again in the following rounds till the end of the whole admission exercise.

Admissions to the part-time programme are to be confirmed.

Overseas Applicants
We welcome overseas applicants. Upon successful application, overseas students will need to arrange for their own student visas.

Application Procedures

The following supporting documents should be uploaded to the on-line application system by logging in https://admissions.hkbu.edu.hk/ta/gateway/LoginForm before the application deadline or expiry of your application account (which is valid for four weeks only), whichever is earlier:

- Latest official academic transcripts
- Award certificate/degree certificate (學位證書), if available
- Graduation certificate (畢業證書), only applicable to Mainland China students
- English language score report (TOEFL or IELTS), if applicable
- Proof of internship experience of all positions, or full-time employment of the most recent one, whichever is applicable
- Certificate for professional qualification (e.g. CFA), if applicable

The original copy of supporting documents is NOT required at the application stage. Should a candidate be given an admission offer by the Programme, he/she will receive notification of the need to submit original/certified true copy of the documents.

Please also provide two letters of reference. Candidates should download the form of reference from the application website and invite their referees to complete the form. Completed forms of reference should be emailed to mfinadm@hku.hk by referees via their valid email accounts before the closing date.

There is a non-refundable application fee of HK$300. Candidates may be invited to write a written test and/or to attend an interview.

Programme Fees
1. The proposed tuition fee for the 2018-2019 intake is HK$381,600. The fee shall be payable in 3 instalments over one year for full-time study, or in 6 instalments over two years for part-time study, irrespective of the number of courses taken in each module.
2. Advanced standing may be granted and the tuition fee would be adjusted downward by HK$31,800 per course.

Contact Us
For further information, please contact:
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Faculty of Business and Economics
Room 503, K.K. Leung Building
The University of Hong Kong
Pokfulam Road, Hong Kong

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Fax: (852) 2549 3753
E-mail: mfinadmision@hku.hk
Web: http://www.ftb.hku.hk/academic-programmes/postgraduate/mfin/

A score of 577 or above (paper-based test), 233 (computer-based test), or 90 (internet-based test) in TOEFL, or a minimum overall band of 7 with no subtest lower than 6.5 in IELTS is required.

Note: The Programme structure and tuition fees are subject to the final approval of the University.
THE UNIVERSITY OF HONG KONG
Faculty of Business and Economics

For further information, please contact:

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